Notice of Allowability	Application No.	Applicant(s)	
	09/470,163	PUTZOLU ET AL.	
	Examiner	Art Unit	
	Quang N. Nguyen	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the Amendment filed on 11/07/2005*.

2. ☒ The allowed claim(s) is/are *1,3-10,13-17 and 19-23*.

3. ☒ The drawings filed on *22 December 1999* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Examiner's Amendment

1. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment maybe filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this Examiner's Amendment was given in a telephone interview with Mr. Paul A. Mendonsa, on December 06th, 2005.

3. Please change **Claim** 1 to:

A computer system comprising:

a forwarding element to perform data forwarding in a computer network, the forwarding element configurable with [[a]] device-specific instructions ~~set~~;

a control element to perform network signaling and control in the computer network, the control element outputting non-device-specific instructions to configure the forwarding element;

an interconnecting element operatively connecting the forwarding element to the control element; ~~and~~

a forwarding element plugin integrated with the control element to conceal from the control element a configuration interface of the forwarding element by ~~receive~~

receiving the non-device-specific instructions from the control element, translating the non-device-specific instructions into the device-specific instructions ~~set~~ of the forwarding element, and transmitting the device-specific instructions to the forwarding element, wherein the forwarding element utilizes the device-specific instructions to configure the forwarding element for performing data forwarding in the computer network; and

an opaque forwarding element plugin integrated with the control element for receiving the non-device-specific instructions from the control element and transmitting the non-device-specific instructions to the forwarding element plugin, and for receiving the translated, device-specific instructions from the forwarding element plugin and transmitting the device-specific instructions to the forwarding element.

4. Please cancel **Claim 2**.

5. Please change **Claim 8** to:

A method for configuring a computer device, the method comprising:

generating non-device-specific instructions by a control element that performs network signaling and control functions for configuring a forwarding element that performs network packet forwarding functions;

transmitting the non-device-specific instructions from the control element to a forwarding element plugin integrated with the control element, the forwarding element plugin to conceal from the control element a configuration interface of the forwarding element;

translating the non-device-specific instructions into device-specific instructions specialized for the forwarding element; and

transmitting the device-specific instructions to the forwarding element for configuring the forwarding element, wherein receiving the non-device-specific instructions from the control element and transmitting the non-device-specific instructions to the forwarding element plugin by an opaque forwarding element plugin integrated with the control element, and wherein receiving the translated, device-specific instructions from the forwarding element plugin and transmitting the device-specific instructions to the forwarding element by said opaque forwarding element plugin.

6. Please cancel **Claims 11-12**.

7. Please change **Claim 17** to:

An article comprising a machine-readable medium storing instructions that, when executed by a processor, the instructions perform [[,]] :

concealing from a control element a configuration interface for a forwarding element by integrating a forwarding element plugin with the control element;

receiving non-device-specific instructions, generated by [[a]] the control element, for configuring [[a]] the forwarding element;

translating the non-device-specific instructions, by the forwarding element plugin, into device-specific instructions specialized for the forwarding element; and

transmitting the device-specific instructions to the forwarding element for configuring the forwarding element, wherein receiving the non-device-specific instructions from the control element and transmitting the non-device-specific instructions to the forwarding element plugin by an opaque forwarding element plugin integrated with the control element, and wherein receiving the translated, device-specific instructions from the forwarding element plugin and transmitting the device-specific instructions to the forwarding element by said opaque forwarding element plugin.

8. Please cancel **Claim 18**.

9. Please change **Claim 23** to:

The computer system of claim 1, wherein the device-specific instructions ~~set is~~ are indicative of the design or hardware implementation of the forwarding element.

10. Claims 1, 3-10, 13-17 and 19-23 are allowed.

11. The following is an examiner's statement of reasons for allowance:

In interpreting the claims, in light of the specification and the applicant's arguments filed on 11/07/2005, the Examiner finds the claimed invention to be patentably distinct from the prior art of record.

Ramaswamy et al. (US 6,424,621), teach a data packet switching system comprises a plurality of network interfaces each adapted to be coupled to respective external networks for receiving and sending data packets to and from the external networks via a particular communication protocol, wherein the data packet switching system further includes a plurality of symmetrical processors, including a control processor and data packet switching processors, and a software interface between switching and control modules to perform data routing and load balancing **(Ramaswamy, Abstract and C3: L9-50).**

Cohen et al. (US 6,434,618), teach a programmable network element operates on packet traffic flowing through the element in accordance with a gateway program which is dynamically uploaded into the network element or unloaded from it via a mechanism separate from the actual packet traffic as the element operates, wherein the element controls and/or manipulates packet traffic flowing through it in some predetermined programmed manner **(Cohen, Abstract and C2: L5-36).**

However, the prior art of record fails to teach or suggest individually or in combination that a method and system for configuring a computer device, comprising: generating non-device-specific instructions by a control element that performs network signaling and control functions for configuring a forwarding element that performs network packet forwarding functions; transmitting the non-device-specific instructions from the control element to a forwarding element plugin integrated with the control element, the forwarding element plugin to conceal from the control element a configuration interface of the forwarding element; translating the non-device-specific

instructions into device-specific instructions specialized for the forwarding element; and transmitting the device-specific instructions to the forwarding element for configuring the forwarding element, wherein receiving the non-device-specific instructions from the control element and transmitting the non-device-specific instructions to the forwarding element plugin by an opaque forwarding element plugin integrated with the control element, and wherein receiving the translated, device-specific instructions from the forwarding element plugin and transmitting the device-specific instructions to the forwarding element by said opaque forwarding element plugin as set forth in independent claims 1, 8 and 17. Claims 1, 3-10, 13-17 and 19-23 are allowed because of the combination of other limitations and the limitation listed above.

The examiner finds the Applicant's arguments on pages 8-10 of the Remarks filed on 11/07/2005 to be persuasive. The applicant argued in substance that the combination of prior art of records fail to disclose the features of the invention including *transmitting the non-device-specific instructions from the control element to a forwarding element plugin integrated with the control element, the forwarding element plugin integrated with the control element to conceal from the control element a configuration interface of the forwarding element*, as claimed in the invention to allow the control element to properly configure the forwarding element without forcing the forwarding element manufacturer to divulge its intellectual property, i.e., divulge its trade secrets and without introducing complexity or latency of packet forwarding in the forwarding element **(see Remarks, page 9 and see Specification, page 12).**

12. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Examiner's Amendment."

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang N. Nguyen whose telephone number is (571) 272-3886.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's SPE, Rupal Dharia, can be reached at (571) 272-3880. The fax phone number for the organization is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RUPAL DHARIA
SUPERVISORY PATENT EXAMINER